European Online Journal of Natural and Social Sciences 2013;
Vol.2, No.3 Special Issue on Accounting and Management.
ISSN 1805-3602
www.european-science.com

Examining Infrastructural Obstacles against Knowledge Management in High Education Centers in Free West Zone of Mazandarn Province

Ali Sheikholeslami Kandaloosi[1*], Kamian Lhazaei[2], Tahereh Khanjani[3]
[*1] Educational Administration, Tonokabon Branch, Islamic Azad University, Tonokabon, Iran
[2] Chaloos branch, Islamic Azad University, Chaloos, Iran
[3] Subject Programming, Science and Research Branch, Islamic Azad University, Tehran, Iran
*Email: a.s.kandaloosi@yahoo.com

Abstract

The aim of the present study is to examine the Infrastructural obstacles against Knowledge Management in high education centers in free west zone of Mazandarn province by descriptive – measurement method; the universe includes all members of scientific board in high education centers in free west zone of Mazandarn province (245 ones). The data were collected by means of a 31-item questionnaire by the researchers for this purpose. The findings are in relation to essential obstacles concerning lack of mission, conversion of traditional to learning organization, the idea to accept power distribution to decrease managers' power, Iranian work and human source, benefiting from proper technology and managing democratically and technological obstacles in strategic, organizational, human, cultural, political and Infrastructural sectors, respectively.

Keywords: Human and organizational obstacles, cultural and political obstacles, technological obstacles, strategic obstacles, Knowledge Management.

Introduction

Knowledge management infrastructures are mechanisms by which an organization manages knowledge and people distribute their knowledge through the substructures in different departments of the organization in a way that the members would be able to benefit effectively from the knowledge.

The main purpose of an infrastructure is only to make knowledge flow in the work process veins. The knowledge management infrastructures include: cultural infrastructure, infrastructure management and IT infrastructure. The organizations are successful, if they have access to deep knowledge and understanding at all levels. So organizations' management should rely on superior knowledge to be able to decide more logically on important issues and improve the operation based on knowledge (Probst, 2006).

The organizations are successful, if they have access to deep knowledge and understanding at all levels. By virtue of actual changes, scientific and technologic developments, it is of significant importance to use knowledge management in organizations in order to prevent from wasting sources and it is necessary to have exact program and study to execute knowledge management in the organization (Behyan, 2005). The state and foreign studied already done are as follows:

Aboonoori et al. (2011) found out 'Examining Knowledge Management Infrastructures in Selected Universities' that the technical infrastructures have no obstacle to manage knowledge in the selected universities except Mazandaran and Gilan, but management and organizational culture are lower than the average in all selected universities.

The findings from Tavalaei's et al. (2009) study, entitled 'Knowing Favorable Model To Manage Knowledge In Iran Oil Industry' indicated that: 1. Considering increasing human factors role development to access stable competitive advantage it is necessary to address knowledge

management in Iran oil industry. 2. Installing knowledge management increases efficiency and effectiveness in oil industry.

Won Yaoon and Ardichvili (2009) did the study, 'Designing Integrated Systems and Knowledge Management' in which they used theoretical and applied considerations; the findings indicated the equilibrium between strategic processes and knowledge management and organizational learning are key points and continuous competitive advantage for organizations' business. Hon G. Wang (2009) examined organizational knowledge in his study, ' Knowledge Management Systems Challenges'; his findings indicated that it is necessary to design a knowledge management system regarding knowledge challenges to protect the purpose creating knowledge. In his study: 'Knowledge Management and Human Sources' Rodriguez (2007) writes, "Knowledge management and related fields emphasize that it is possible to access stable competitive advantage in new world economic atmosphere, if the organizational capacity and potential are enough to develop and use properly the sources based on organization knowledge"; he presented at two dimensional matrix: strategic value and unique mental source the knowledge was divided in four groups: special, usual, axial and necessary and presented the mechanisms necessary to benefit from such human sources.

Considering knowledge management has not found its position in high education centers in free region of west Mazandaran province it seems necessary to know infrastructural obstacles against knowledge management there. This study examines following obstacles: human, organizational, cultural, political, technological and strategic. It should be noted that in addition to above obstacles there are other ones against proper execution of knowledge management, but it seems generality of them may include other obstacles, too.

Thus, this study is essentially to respond following question: What is the Infrastructural Obstacles against Knowledge Management in High Education Centers in Free West Zone of Mazandarn Province in academic year: 2012 – 2013?

1 - What are the human obstacles against knowledge management in high education centers in free west zone of Mazandarn Province?

2 - What are the organizational obstacles against knowledge management in high education centers in free west zone of Mazandarn Province?

3 - What are the cultural obstacles against knowledge management in high education centers in free west zone of Mazandarn Province?

4 - What are the cultural obstacles against knowledge management in high education centers in free west zone of Mazandarn Province?

5 - What are the technologic obstacles against knowledge management in high education centers in free west zone of Mazandarn Province?

6 - What are the strategic obstacles against knowledge management in high education centers in free west zone of Mazandarn Province?

Materials and Methods

Present study is applied and has survey and descriptive method; the researcher does not change the variables and does not create defined conditions for events occurrence but describes objectively, really and regularly the situation or subject and examines the nature, conditions and constituents dogmatically (Hassanzadeh, 2007).

Population and sample

The universe includes all female and male faculty member of higher education centers in free west zone of Mazandarn Province (N = 565). In this study, Morgan Table was used to define the sample which is 254 (N = 254). The sampling method was stratified randomly and the number of

each stratum was defined according to the sample members' distribution. Each stratum with the number of members in each stratum per total and multiplied it by total selected sample number was gained and is presented separately in above table.

Methods

The journals, books and deeds available in the library from internet sites, field observation and questionnaire (Issued by the researcher) were used to collect related data; the questionnaire included 31 questions: 1 -3 questions about human obstacles, 4 – 13 questions about organizational obstacles, 14 – 17 questions about cultural obstacles, 18 – 21 questions about political obstacles, 22 – 25 questions about technological obstacles and 26-31 questions about strategic obstacles.

The questionnaire was administered to the members of scientific board in high education centers in free west zone of Mazandarn province and having collected related data Cronbach alpha coefficient was used to define the reliability; the Cronbach alpha was 0.774 in all questions. In present study the collected data were analyzed descriptive – inferential statistics. Kolmogorov – Smirnov tests were used in inferential statistics to normalize the data and 'K' test was used in the table (Agreed in this study). The factor analysis test and Friedman ranking test were used to analyze the data.

Results

In relation to the main question (What are infrastructural obstacles against knowledge management in high education centers in free west zone of Mazandarn province?) it is necessary to know the strong and weak points of the obstacles against the knowledge management execution. Friedman ranking method was used to rank the five point Likert scale responses of the questionnaires shown in Table 1.

Table 1:Ranks average and the rows related to technologic obstacles:

N	Average Rating	Infrastructure barriers	Row
4	3.55	Human	1
6	2.22	Organizational	2
3	4.47	Cultural	3
3	3.93	Political	4
1	4.49	Technology	5
5	2.34	Strategic	6

As you see the most important infrastructure obstacle is in technological field with average: 4.49; the cultural obstacle is second (Average = 4, 47) and political obstacle is third (3.93). Friedman ‘K2’ test was used to examine the significant difference between the ranks means. Table 2indicates Friedman 'K2' test and significant level related to ranks' means in field of technologic obstacles.

Table 2: Friedman 'K2' tests statistics and significant level related to ranks' means in field of technologic obstacles

Friedman 'K2' test statistics	Number	df	Significant level
364.745	245	5	0.711

As you see in above Table Friedman 'K2' test statistics are 364.745 with significance level of less than 0.05 between ranks' means in field of infrastructure obstacles.

In relation to the main question (What are human obstacles against knowledge management in high education centers in free west zone of Mazandarn province?) it is necessary to know the strong and weak points of the obstacles against the knowledge management execution. Friedman ranking method was used to rank the five point Likert scale responses of the questionnaires shown in Table 3.

Table 3: Ranks means and the rows related to human obstacles

Row	Human obstacles questions	Ranks' means	Ranks' row
1	Fear from sharing personal knowledge	1.97	3
2	Idea to accept power distribution to decrease managers' power	2.05	2
3	Fear from knowledge distribution	1.98	2

As you see the idea to accept power distribution to decrease managers' power with rank mean: 2.05 is first. Fear from knowledge distribution is second (1.98) and fear from sharing personal knowledge is third (1.97).

Friedman ‘K2’ test was used to examine the significant difference between the ranks means. Table 4 indicates Friedman 'K2' tests and significant level related to ranks' means in field of human obstacles.

Table 4: Friedman 'K2' tests statistics and significant level related to ranks' means in field of human obstacles.

Significant	df	Number	Chi-square
0/001	2	245	1.769

As you see in above Table Friedman 'K2' test statistics are183.35 with significance level of less than 0.05 between ranks' means in field of human obstacles.

In relation to the second question (What are organizational obstacles against knowledge management in high education centers in free west zone of Mazandarn province?)

Friedman ranking method was used to rank the strong and weak points of the organizational obstacles. 4 – 13 questions indicate the organizational obstacles in executing knowledge management. Table 4-9 show questions' row, rank average concerning the human obstacles questions and rank row of the questions based on Friedman rank method.

Table 5: Ranks' means and row related to organizational obstacles

Ranks	Mean	Questions	Tier
6	5.47	Rigid structures	1
3	5.98	Structures with the possibility of poor communication	2
8	4.82	Lack of top management support programs	3
10	4.27	Short review and fiddling review	4
9	4.58	Use leadership styles	5
7	5.15	Salaries and benefits insufficient	6
1	7.15	Traditional to system learner into organizational systems	7
5	5.73	Entity vague repetitive occupations Routine	8
4	5.80	There is in appropriate occupations	9
2	6.06	Ambiguity and contradiction in roles	10

As you see question 10 (conversion of traditional to learning organization) with rank average: 7.15 is the most important organizational obstacle concerning knowledge management infrastructure and the second one is question 13 (Ambiguity and contradiction in roles and groups' duties). The third one is question 5 (Structure with weak relations). Totally the respondents indicated shortsighted and partial views.

Friedman 'K2' test was used to examine the significant difference between the ranks means.

Table 6: indicates Friedman 'K2' test statistics and significant level related to ranks' means in field of human obstacles

Sig.	df	Number	Chi-square
0/0001	9	245	216/731

As you see in above Table Friedman 'K2' test statistics are 216.731 with significance level 0.0001 which is less than 0.05 and indicates the difference between ranks' means in field of significant organizational obstacles.

The third question (Cultural obstacles against knowledge management in high education centers in free west zone of Mazandarn province) analysis is shown in following table:

Table 7: indicates Ranks' means and row related to cultural obstacles:

Ranks	Mean	Questions	Tier
3	2.55	Religious belief	1
4	2.04	Value system governing agencies	2
2	2.56	Establishment a participatory culture.	3
1	2.85	Iranian culture establishment labor and capital	4

As you see in above table in field of cultural obstacles the Iran work and capital culture installation with rank mean: 2.85 are first and the second is common culture with rank average: 2.56 and question 14 (religious beliefs) with 2.55 and question 15 with rank mean 2.04 are third and fourth, respectively.

Friedman 'K2' test was used to examine the significant difference between the ranks means.

Table 8: Friedman 'K2' tests statistics and significant level related to ranks' means in field of cultural obstacles.

Sig.	df	Number	Chi-square
0/0001	3	245	71/924

As you see in above Table Friedman 'K2' test statistics are 71.924 with significance level of less than 0.05 between ranks' means in field of cultural obstacles.

In relation to the fourth question (What are political obstacles against knowledge management in high education centers in free west zone of Mazandarn province?) it is necessary to use Friedman ranking method to know the strong and weak points of political obstacles against knowledge management. Table 9 indicates the ranks means and the rows related to political obstacles.

Table 9: The ranks means and the rows related to political obstacles:

Ranks	Mean	Questions	Row
(3)	2.60	Consistency manage in the organization	1
(2)	2.61	Political openness	2
(4)	2.07	Establishment administrative the bureaucracy	3
(1)	2.72		4

As you see in above Table, in field of political obstacles question 21 (Executing democratic management) with rank mean: 2.72 is first and the second is question 19 (Creating open political atmosphere) with rank average: 2.61 and question 18 (Management stability in organizations) with 2.60 and question 20 with rank mean 2.07 are third and fourth, respectively.

Friedman 'K2' test was used to examine the significant difference between the ranks means.

Table 10: indicates Friedman 'K2' test statistics and significant level related to ranks' means in field of political obstacles.

Sig.	df	Number	Chi-square
0/0001	3	245	50/050

As you see in above Table Friedman 'K2' test statistics are 50.050 with significance level 0.0001 which is less than 0.05 indicating there is no significant difference between ranks' means in field of political obstacles.

In relation to the fifth question (What are technological obstacles against knowledge management in high education centers in free west zone of Mazandarn province?) it is necessary to know the obstacles against knowledge management execution. Friedman ranking method was used to rank the five point Likert scale responses of the questionnaires concerning technological obstacles shown in Table 11.

Table 11: Ranks average and the rows related to technologic obstacles:

Ranks	Mean	Questions	Tier
(1)	2.23	The appropriate use of technology	1
(2)	2.49	Mechanize organizational routines	2
(1)	2.53	Intelligent current procedures	3
(3)	2.45	The technologies update	4

Table 12: indicates Friedman 'K2' test statistics and significant level related to ranks' means in field of technological obstacles.

Sig.	df	number	Chi-square
0/711	3	245	1.377

As you see in above Table Friedman 'K2' test statistics is 1.377 with significance level more than 0.05 indicating there is significant difference between ranks' means in field of technological obstacles.

In relation to the sixth question (What are strategic obstacles against knowledge management in high education centers in free west zone of Mazandarn province?) it is necessary to know the strong and weak points of strategic obstacles against knowledge management. In line with this Friedman ranking method was used to rank the responses concerning questions 26 – 31 of the strategic obstacles questionnaire (6 questions).

Table 13: Ranks average and the rows related to strategic obstacles:

Row	Mean	Questions	Tier
(4)	3.45	The absence of perspective associated with the knowledge management	26
(1)	3.80	Absence associated with missions Knowledge Management	27
(2)	3.67	Absence of the dominant values of knowledge management	28
(5)	3.38	Failure to identify environmental opportunities and threats	29
(6)	3.12	Lack identify the strengths and weaknesses of associated with knowledge management	30
(3)	3.59	Lack strategic objectives associated with knowledge management	31

As you see in above Table by virtue of Friedman ranking method the ranks' means of the 6 questions were gained. The most ranks' mean was related to question 27 (Lack of mission related to knowledge management) with rank mean: 2.85 which is the greatest obstacle against knowledge management and the second one was related to question 28 (Lack of values dominant with knowledge management) with rank average: 3.67 and question 31 with 3.59 and question 26 (Lack of view concerning knowledge management) are third and fourth, respectively.

By virtue of analyzing Table 14 we see the weakest obstacle against knowledge management execution is the strategic one with rank mean: 3.12 related to question 30 indicating strong and weak points related to knowledge management. So the strategic identification of strong and weak points are clear in the knowledge management structure so it is the most important point in the way to execute knowledge management. Friedman 'K2' test was used to examine the significant difference between the ranks means.

Table 14: Friedman 'K2' tests statistics in field of strategic obstacles.

Sig.	df	number	Chi square
0/0001	5	245	33/475

As you see in above Table Friedman 'K2' test statistics is 33.475 with significance level less than 0.05 indicating there is significant difference between ranks' means in field of strategic obstacles.

Conclusion

By virtue of the findings and discussion concerning the main question of the study in field of infrastructural obstacles the most important obstacle is in field of technology with rank mean: 4.49. Friedman 'K2' test statistics equal to 364.745 with significant level less than 0.05 indicates significant difference between ranks' mean in field of infrastructural obstacles. By virtue of the study findings it can be said that the most important obstacle against installing knowledge management is in field of technology and then in field of culture and politics. So by mechanizing organizational

method and up-to-dating communicative devices and administrative automation we may hope more in installing knowledge management.

In relation to question 1 it should be noted that the human obstacles (Question 2: Accepting knowledge distribution to decrease managers' power) with rank mean: 2.05 is the first one. Question 3 (Fear from knowledge distribution is second (1.98) and fear from sharing personal knowledge is third (1.97). Friedman 'K2' test statistics is 183.35 with significant level less than 0.05 between ranks' mean in field of human obstacles field.

By virtue of the findings and discussion related to the question 2 the most important obstacle against knowledge management is the organizational one with rank mean: 7.15. The third one is question 5 (Impossible communication between employees and organization environment) in view of organizational obstacles. Friedman 'K2' test is 216.731 with significance level: 0.05 which is less than 0.05 indicating the difference between ranks' mean is significant in 10 organizational questions. The findings from present study are supported by and are in accordance with Han's et al. (2009) ones.

In field of cultural obstacles related to question 3 it should be noted that the work and human source culture installation with rank mean: 2.85 is first and the second is common culture with rank average: 2.56 and question 14 (religious beliefs) with 2.55 and question 15 with rank mean 2.04 are third and fourth, respectively. Friedman 'K2' testis 71.924 with significance level of less than 0.05 between ranks' in field of cultural obstacles. The findings from present study are supported by and are in accord with Aboonoori's et al. (2011) ones.

In field of political obstacles related to question 4 (Executing democratic management) with rank mean: 2.72 is first and the second is question 19 (Creating open political atmosphere) with rank average: 2.61 and question 18 (Management stability in organizations) with 2.60. Friedman 'K2' test is 50.050 with significance level of less than 0.05 between ranks' in field of political obstacles. Friedman ranking method was used to rank the five point Likert scale responses concerning the members of scientific board (Technologic questions). In field of technological obstacles the questions 22 NAD 24 with rank mean: 2.53 were first. Question 23 was second and question 25 with rank mean 2.45 was third. Friedman 'K2' test is 1.377 with significance level of more than 0.05 indicating no significant level in field of technological obstacles. The findings from present study are supported by and are in accord with Han's et al. (2009) ones.

The findings from responses of the sixth question (What are strategic obstacles against knowledge management in high education centers in free west zone of Mazandarn province?) Friedman 'K2' test method indicates the most rank's mean was related to question 27 (Lack of mission related to knowledge management). The second one is related to question 28 (Lack of values dominant with knowledge management) with rank average: 3.67) and the third one is related to question 29 (Lack of identification of environmental opportunities and threats) with rank mean 3.59 and also the fourth strategic obstacle is related to question 26 (Lack of views related to knowledge management) and Friedman 'K2' test statistics is 33.475 which is less than 0.05 so the difference between ranks' mean is significant in field of strategic obstacles. The findings from present study are supported by and are in line with Han's et al. (2009) and Erchioli et al. (2009) ones. So it is necessary the executive management has group sessions regularly to accelerate knowledge management leading to realize practical (Not theoretical) programs to define values properly to install it.

By virtue of the study findings concerning infrastructural obstacles against knowledge management we advise the high education managers to form groups special to deal with cultural, political and technological obstacles and hold classes in short – terms and create digital spaces in

university in order to have more communications with personnel to install knowledge management better.

References

Aboonoori, A. Saeidi, P. Niazi, & A. Zanganeh, M.B. (2010). Examining Knowledge Management Infrastructures In Selected Universities, seasonal scientific-research periodical: Knowledge Management, 3 (1), 91-116.

Ardichvili, A and yoon, Seung w.y .Aug (2009) ."Designing integrative knowledge management System" :theoretical considerations and practical application .Advances in Developing Human Resources,sanfrancisco .Vol11.Lss3, pg 307.

Hahn, J., & Wang, T. (2009). Knowledge management systems and organization knowledge processing .Challenges: A filed experiment .Krannert Graduate School of management, Purdue University.

Hassanzadeh, M. (2007). Knowledge Management: Concepts and Infrastructures, Tehran, Ketabdar publications.

Proust G. R. & Stephen, R. K. (2006). Knowledge Management, translated by Ali Hosseinikhah, Tehran, and Yasteraoon publications.

Rodriguez, A. (2007). Organizational competiveness: A Framework for Human capital analysis fess knowledge management and practical de Pablo's", Journal of Knowledge Management, 3.

Tavalaei, R. A. , Taheri, A. & Nasr Esfahani, H. (2012). Introduction To Knowing Favorably Knowledge Management In Oil Industry of Islamic Republic of Iran, Seasonal periodical : Management and Human Sources, 3(11).